IN THE CLAIMS:

Please replace "Claims" in the first line in the claims page with --What is claimed is:--.

In accordance with 37 C.F.R. 1.121, please cancel claims 15-18, 20-34, and 37, drawn to non-elected subject matter, and also cancel claims 1, 2, 7, 12-14, and 19, without prejudice or disclaimer. Applicants reserve the right to file the subject matter of the cancelled claims in a divisional application(s).

Please replace claims 8-11 with the following claims, as amended, without prejudice or disclaimer. The changes are shown in the attached "Version with Markings to Show Changes Made."

8. (Amended) A vaccine comprising a vaccine vector wherein the vaccine vector comprises a nucleic acid molecule which encodes a polypeptide selected from any one of:

(a) SEQ ID No: 2;

(b) an immunogenic fragment comprising at least 12 consecutive amino acids from SEQ ID No: 2; and

(c) the polypeptide of (a) or (b) which has been modified by conservative amino acid substitution without loss of immunogenicity, wherein said modified polypeptide is at least 75% identical in amino acid sequence to the corresponding polypeptide of (a) or (b);

wherein the nucleic acid molecule is either operatively linked to one or more control sequences for expression of the polypeptide in a mammalian cell, or is integrated and expressed in a bacterial cell suitable for use as a vaccine vector.

9. The vaccine of claim 38 wherein the second nucleic acid encodes an additional *Chlamydia* polypeptide.

10. (Amended) A pharmaceutical composition comprising a pharmaceutically acceptable carrier or diluent suitable for use in a vaccine and a nucleic acid molecule

comprising a nucleic acid sequence which encodes a polypeptide selected from any one of:

(a) SEQ ID No: 2;

(b) an immunogenic fragment comprising at least 12 consecutive amino acids from SEQ ID No: 2; and

(c) the polypeptide of (a) or (b) which has been modified by conservative amino acid substitution without loss of immunogenicity, wherein said modified polypeptide is at least 75% identical in amino acid sequence to the polypeptide of (a) or (b);

wherein the nucleic acid molecule is operatively linked to one or more control sequences for expression of the polypeptide in a mammalian cell.

11. (Amended) The vaccine according to claim 8 further comprising a pharmaceutically acceptable carrier.

In accordance with 37 C.F.R. 1.121, please add new claims 38-41, as follows:

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38. (New) The vaccine of claim 8 further comprising a second nucleic acid encoding an additional polypeptide which enhances the immune response to the polypeptide selected from any one of:

(a) SEQ ID No: 2;

(b) an immunogenic fragment comprising at least 12 consecutive amino acids from SEQ ID No: 2; and

(c) the polypeptide of (a) or (b) which has been modified by conservative amino acid substitution without loss of immunogenicity, wherein said modified polypeptide is at least 75% identical in amino acid sequence to the corresponding polypeptide of (a) or (b).

39. (New) The vaccine of claim 8 wherein the vaccine vector comprises a nucleic acid molecule which encodes SEQ ID No: 2.

40. (New) The vaccine of claim 8 wherein the vaccine vector comprises a nucleic acid molecule which encodes an immunogenic fragment comprising at least 12 consecutive amino acids from SEQ ID No: 2.